

6.(Amended) A [The] leptin receptor (OB-R) polypeptide [of Claim 1] which is selected from the group consisting of:

- a. N-terminal corresponding to OB-Ra through Lys<sup>889</sup> and C-terminal to a C-terminal selected from the group consisting of OB-Rb, OB-Rc, and OB-Rd after Lys<sup>889</sup>;
- b. N-terminal corresponding to OB-Rb or OB-Rc through Lys<sup>889</sup>, and C-terminal corresponding to OB-Ra or OB-Rd after Lys<sup>889</sup>;
- c. N-terminal corresponding to OB-Rd through Lys<sup>889</sup>, and C-terminal corresponding to OB-Ra, OB-Rb, or OB-Rc after Lys<sup>889</sup>;
- d. N-terminal corresponding to SEQ ID NO:55 [OB-R] from Pro<sup>664</sup> to Lys<sup>889</sup>, and C-terminal corresponding to OB-Ra, OB-Rb, OB-Rc, or [and] OB-Rd from Lys<sup>889</sup>;
- e. N-terminal corresponding to SEQ ID NO:55 [OB-R] from Met<sup>733</sup> to Lys<sup>889</sup>, and C-terminal corresponding to OB-Ra, OB-Rb, OB-Rc, or [and] OB-Rd from Lys<sup>889</sup>;
- f. N-terminal selected from the group consisting of OB-Ra, OB-Rb, OB-Rd, and OB-R from Pro<sup>664</sup> [,] to His<sup>796</sup>, and OB-Re from His<sup>796</sup>;
- g. N-terminal corresponding to SEQ ID NO:55 [OB-R] from Met<sup>733</sup> to His<sup>796</sup>, and OB-Re from His<sup>796</sup> [,or allelic variants thereof.]; and
- h) allelic variants of any of subparts a) through g).

7.(Amended) A [The] leptin receptor (OB-R) polypeptide [of Claim 1] wherein

- a) the N-terminal sequence is selected from the group consisting of
  - i. amino acid residues 1-889;
  - ii. amino acid residues 23-889;
  - iii. amino acid residues 28-889;
  - iv. amino acid residues 133-889;
  - v. amino acid residues 733-889;
  - vi. amino acid residues 1-796;
  - vii. amino acid residues 23-796;

- viii. amino acid residues 28-796;  
 ix. amino acid residues 133-796; [and]  
 x. amino acid residues 733-796; and  
 xi) allelic variants of any of subparts i) through x); and  
 b) the C-terminal sequence is selected from the group consisting of  
 i) SEQ ID NO:11;  
 ii) SEQ ID NO:12;  
 iii) SEQ ID NO:13;  
 iv) SEQ ID NO:14; [and]  
 v) SEQ ID NO:15; and  
 vi) allelic variants of any of subparts i) through v);

wherein the numbering in subpart a) is based on the amino acid sequence of SEQ ID NO:55 [the full length transcribed murine leptin receptor, including the signal peptide, or allelic variants thereof].

8.(Amended) A [The] leptin receptor (OB-R) polypeptide [of Claim 1] which is a soluble receptor.

9.(Amended) The soluble leptin receptor of Claim 8 which is selected from the group consisting of

- a) OB-Re;  
 b) an N-terminal sequence which is selected from the group consisting of:  
 i) OB-Ra,  
 ii) OB-Rb,  
 iii) OB-Rd, and  
 iv) corresponding to SEQ ID NO:55 [OB-R] from Pro<sup>66a</sup>, through His<sup>799</sup>, and  
 a C-terminal sequence which is OB-Re from His<sup>796</sup>; and  
 v) allelic variants of any of subparts i) through iv);

c) an N-terminal sequence which is selected from the group consisting of

- i) amino acid residues 1-796;
- ii) amino acid residues 23-796;
- iii) amino acid residues 28-796;
- iv) amino acid residues 133-796; [and]
- v) amino acid residues 733-796; and
- vi) allelic variants of any of subparts i) through v): and

a C-terminal sequence which is SEQ ID NO:15;

wherein the numbering in subparts b) and c) is based on the amino acid sequence of SEQ ID NO:55 [the full length transcribed murine leptin receptor, including the signal peptide, or allelic variants thereof].

14. (Amended) A [The] leptin receptor polypeptide, which is a human leptin receptor and which comprises [of Claim 12 comprising] an amino acid substitution selected from the group consisting of: Phe for Ser<sup>36</sup>; Asp for Tyr<sup>44</sup>; Ser for Leu<sup>49</sup>; Pro for Ser<sup>54</sup>; Leu for Ser<sup>60</sup>; Ala for His<sup>63</sup>; Ala for Thr<sup>66</sup>; Ala for Pro<sup>70</sup>; Ile for Thr<sup>77</sup>; Tyr for His<sup>78</sup>; Pro for Ser<sup>80</sup>; Gly for Arg<sup>92</sup>; Gly for Asp<sup>96</sup>; Thr for Ala<sup>103</sup> or Ile<sup>106</sup>; Ser for Leu<sup>118</sup>; Gly for Asp<sup>124</sup>; Thr for Lys<sup>138</sup>; Pro for Ser<sup>146</sup>; Asp for Val<sup>164</sup>; Leu for Gln<sup>177</sup>; Asp for Gly<sup>179</sup>; Gly for Glu<sup>192</sup>; deletion for Cys<sup>193</sup>; His for Leu<sup>197</sup>; Ser for Ile<sup>221</sup>; Leu for Asn<sup>233</sup>; Leu for Ser<sup>273</sup>; deletion for Thr<sup>278</sup>; Ala for Asp<sup>285</sup>; Glu for Lys<sup>286</sup>; Ser for Gly<sup>310</sup>; Arg for Met<sup>370</sup>; Ile for Ser<sup>379</sup>; Ser for Phe<sup>394</sup>; Ala for Glu<sup>417</sup>; Gly for Glu<sup>459</sup>; Ser for Ile<sup>476</sup>; Thr for Ile<sup>482</sup>; Thr for Ile<sup>551</sup>; His for Tyr<sup>586</sup>; Lys for Ile<sup>648</sup>; Ala for Ser<sup>686</sup>; His for Cys<sup>687</sup>; Thr for Ile<sup>759</sup>; Ile for Asn<sup>776</sup>; Asp for Gly<sup>781</sup>; Gly for Glu<sup>782</sup>; Gly for Ser<sup>827</sup>; Ala for Asp<sup>832</sup>; Arg for Pro<sup>892</sup>; Thr for Glu<sup>893</sup>; Asp for Thr<sup>894</sup>; or Leu for Glu<sup>896</sup>, wherein the numbering of the amino acids corresponds to the numbering adopted for SEQ ID NO:56 [the human leptin receptor, including the signal sequence].

Please add the following claims:

67. The leptin receptor of any of Claims 3-9 and 14 which is a human leptin receptor.